AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Canceled)
2. (Canceled)
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (Canceled)
7. (Canceled)

8. (Currently Amended) A method according to claim [[1]]40, wherein said chitosan has a concentration in said aqueous acidic solution is between 0.1 to 2 wt%.

9. (Currently Amended) A method according to claim [[1]]40, wherein said aqueous acidic solution of chitosan comprises an acid selected from the group consisting of acetic acid, lactic acid, citric acid and hydrochloric acid, said acidic solution having a pH of $\leq$ 6.9.

10. (Currently Amended) A method according to claim [[1]]40, wherein said alkalizing step uses a base selected from the group consisting of sodium hydroxide, potassium hydroxide and ammonium hydroxide.

11. (Currently Amended) A method according to claim [[1]]40, wherein said alkalizing step uses a base selected from the group consisting of sodium carbonate, potassium carbonate and ammonium carbonate.

12. (Canceled)
13. (Canceled)
14. (Canceled)
15. (Canceled)

16. – 39. (Cancelled)

40. (Previously Presented) A method for preparing modified microcrystalline chitosan, comprising the steps of:

firstly, dissolving chitosan into an aqueous acidic solution;

second, degrading chitosan in an aqueous acidic solution under conditions to achieve a desired molecular weight range and polydispersity, said solution having a concentration of at least about 0.001 wt% of chitosan, wherein the degrading is enzymatic, hydrolytic, or oxidative, said degrading comprising at least one of the following:

introducing at least one of cellulases, chitanases, or xylanases with an enzymatic activity greater than 0.01 units/cm^3 into the aqueous acidic solution at a temperature between 30 degrees C and 60 degrees C for up to 100 hours, and then increasing the temperature to above 70 degrees C to deactivate the enzyme;

incubating the chitosan in the acidic solution having chydrochloric acid or chloroacetic acid at an amount greater than 0.001 wt% of the chitosan at a temperature between 40 degrees C and 80 degrees C for up to 100 hours; or

introducing an oxidative agent into the acidic solution at a temperature greater than 30 degrees C to 60 degrees C, wherein the oxidative agent is10% hydrogen peroxide or sodium perborate in an amount between 0.01 wt% to 0.5 wt% of the chitosan;

thirdly, alkalizing at vigorous agitation said acidic aqueous solution of chitosan with an aqueous base to form an alkaline solution having chitosan concentration of about 0.01-20 wt%, said alkaline solution having a pH greater than 7.0, wherein the base is a hydroxide or ammonia; and

fourthly, precipitating said microcrystalline chitosan from said alkaline solution.

41. (Previously Presented) A method according to claim 40, wherein the degrading is enzymatic.

42. (Previously Presented) A method according to claim 40, wherein the degrading is hydrolytic.

43. (Previously Presented) A method according to claim 40, wherein the degrading is oxidative.